



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/639,658	08/15/2000	Michael R. Hansen	WEYE115753	1795

26389 7590 10/19/2004

CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC  
1420 FIFTH AVENUE  
SUITE 2800  
SEATTLE, WA 98101-2347

EXAMINER

NGUYEN, TAN D

ART UNIT PAPER NUMBER

3629

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/639,658

Applicant(s)

HANSEN ET AL. *SH*

Examiner

Tan Dean D. Nguyen

Art Unit

3629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 55, 57-59, 61, 62, 64, 65 and 67-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 55, 57-59, 61, 62, 64, 65 and 67-79 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Response & Argument*

The response and argument filed 7/16/04 has been considered and responded as followed.

### *Claim Rejections - 35 USC § 102*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Claim Rejections - 35 USC § 103*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. **Claims 55, 57-59, 61-62, 64-65, 67-79 (method<sup>1</sup>) are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over CHEN et al (US Patent 5,360,419).**

**As for independent method<sup>1</sup> claim 55**, CHEN et al disclose a method for forming absorbent structure comprising a fibrous web of cellulosic material comprising:

a) providing chemical-containing cellulose **fiber (1)** , the chemical-containing cellulose fiber comprising cellulose fiber having hydrogen bonding functional sites and an amount of a **chemical agent (2)**, wherein the **chemical agent** comprising non-polymeric chemical having functional groups selected from the group consisting of a hydroxyl (alcohol, diol (glycerin, glycol )) {see col. 4, lines 50-57 (or c4:50-57) especially: "additionally, other water-soluble **materials**, **plasticizers** or **modifiers** may be included ... in the fiber web. Exemplary of other suitable materials which may be

Art Unit: 3629

included in the fibrous webs of the absorbent structures of the present invention are alcohol, glycerin, sorbitol, glycol, ..., and the like"}, the **chemical agent** molecules having at least one functional group capable of forming a hydrogen bond or a coordinate covalent bond with **superabsorbent particles (3)** (see c9:60-69, c10:1-15, or c15:20-28), and at least one functional group capable of forming a hydrogen bond with the cellulose fiber (1), and

b) combining superabsorbent particles (3) with the chemical-containing cellulose fiber (1). (see col. 1, lines 30-45 (or c1:30-45), c3:45-55, c4:55-65, c6:10-20, c9:60-69, or c10:1-15).

As for the limitation of the title "binder" on the chemical agent or a function of the chemical agent, this is inherently included in the agent above since the same material are used in the claimed invention (diol (glycerin or glycol)) or the same agent solution spraying to the web fiber. As for the limitation of "functional groups capable of forming ... bond", the chemical agent of CHEN et al has the functional groups capable of the same functions. Note that "capable of" is a very weak limitation and/or carry little patentable weight since it merely deals with "the capacity of being able to do something" and not "actually doing it" or performing the step.

As for the limitation of "from about 1 to 40% by weight based on the weight of the cellulose fiber" of a chemical agent/binder, this is inherently included in the teaching of CHEN et al above when it recommends adding the other suitable material, i.e. plasticizer/modifier, into the fiber webs. Surely, it has to have some amount or some % greater than 0.00%. Note that "from **about 1 %**" reads over **0.001 %** or a little portion

Art Unit: 3629

of the plasticizer/modifier. Note that on c7:25-35, CHEN et al mentions the ratio of the forming materials in the range from about 0.001 to about 10% by weight of fibrous web. Therefore, the range of the suitable material is inherently in the range above or would have been obvious to use a similar range above. Alternatively, the amount of other suitable material, plasticizer/modifier, vary depend on the particular type of plasticizer, the type of the forming materials, the particular flexibility effects, desired absorbent product property, cost of product, etc. of which the feed rate is within the skilled of the artisan as mere routine experimentations to determine optimum results and the optimizing of result effective variables is considered as routine experimentation to determine optimum or economically feasible reaction conditions and would have been obvious to the skilled artisan, absent evidence of unexpected results. In re Aller, 105 USPQ 233.

As for the limitation of the last step " c) binding the particles to the fibers", this is inherently included in the process of CHEN et al because the same chemical agent (glycerin or glycols) are used and sprayed on the web fibers as in the claimed invention. Alternatively, the selection or use of adjacent homologs or subsequent subspecies of the same class, i.e. diols or alcohols, would have been obvious to a skilled artisan as mere using equivalent material to achieve similar results, absent evidence of unexpected results. (see In re Mills, 126 USPQ 513, 316; 281 F2d 218 (CCPA)).

**As for dep. claim 57 or 61**, which deals with the limitation of the proportion or composition % of the binder, this is rejected for the same reason set forth above.

Art Unit: 3629

**As for dep. claim 58 or 76**, this is shown on 3:10-20, and especially "other suitable fibers" are known.

**As for dep. claim 59 or 78**, this is inherently included in the use of "alcohol, glycerin, glycol" as indicated above or 4:50-60.

**As for dep. claims 62, 64, 65, or 67**, this is taught in 4:50-60, 1:30-45.

**As for dep. claim 68**, this is shown on 5:15-20.

**As for dep. claims 69-70**, this is shown on 15:25-30.

**As for dep. claims 71-75, or 77**, which deals with the types of glycol, this is shown on 4:55-58. Alternatively, the selection or use of adjacent homologs or subsequent subspecies of the same class, i.e. diols or alcohols, would have been obvious to a skilled artisan as mere using equivalent material to achieve similar results, absent evidence of unexpected results. (see *In re Mills*, 126 USPQ 513, 316; 281 F2d 218 (CCPA)).

**As for dep. claim 79**, this is rejected for the same reason set forth in claim 59 or 78. Alternatively, the selection or use of adjacent homologs or subsequent subspecies of the same class, i.e. hydroxy acid species, (hydroacetic acid (CH<sub>2</sub>-OH-COOH), lactic acid (CH<sub>3</sub>CH-OH-COOH), would have been obvious to a skilled artisan as mere using equivalent material (hydrogen bond and/or coordinate covalent bond) to achieve similar results, absent evidence of unexpected results. (see *In re Mills*, 126 USPQ 513, 316; 281 F2d 218 (CCPA)).

### ***Response to Arguments***

4. Applicant's arguments filed 7/18/2004 have been fully considered but they are not persuasive for the reasons set forth in the rejections of claim 55 above.

As for the limitation of the title "binder" on the chemical agent or a function of the chemical agent, this is inherently included in the agent above since the same material are used in the claimed invention (diol (glycerin or glycol)) or the same agent solution spraying to the web fiber.

As for the limitation of "functional groups capable of forming ... bond", the chemical agent of CHEN et al has the functional groups capable of the same functions. Note that "capable of" is a very weak limitation and/or carry little patentable weight since it merely deals with "the capacity of being able to do something" and not "actually doing it" or performing the step.

As for the limitation of "from about 1 to 40% by weight based on the weight of the cellulose fiber" of a chemical agent/binder, this is inherently included in the teaching of CHEN et al above when it recommends adding the other suitable material, i.e. plasticizer/modifier, into the fiber webs. Surely, it has to have some amount or some % greater than 0.00%. Note that "from **about 1 %**" reads over **0.001 %** or a little portion of the plasticizer/modifier. Note that on c7:25-35, CHEN et al mentions the ratio of the forming materials in the range from about 0.001 to about 10% by weight of fibrous web. Therefore, the range of the suitable material is inherently in the range above or would have been obvious to use a similar range above. Alternatively, the amount of other suitable material, plasticizer/modifier, vary depend on the particular type of plasticizer,

Art Unit: 3629

the type of the forming materials, the particular flexibility effects, desired absorbent product property, cost of product, etc. of which the feed rate is within the skilled of the artisan as mere routine experimentations to determine optimum results and the optimizing of result effective variables is considered as routine experimentation to determine optimum or economically feasible reaction conditions and would have been obvious to the skilled artisan, absent evidence of unexpected results. In re Aller, 105 USPQ 233.

As for the limitation of the last step " c) binding the particles to the fibers", this is inherently included in the process of CHEN et al because the same chemical agent (glycerin or glycols) are used and sprayed on the web fibers as in the claimed invention. Alternatively, the selection or use of adjacent homologs or subsequent subspecies of the same class, i.e. diols or alcohols, would have been obvious to a skilled artisan as mere using equivalent material to achieve similar results, absent evidence of unexpected results. (see In re Mills, 126 USPQ 513, 316; 281 F2d 218 (CCPA)).

No evidence of unexpected results have been shown.



***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) US Patent 2,340,311 in 1944 is cited to show well known feed rate of plasticizer, i.e. polyhydric alcohols (as in the claimed invention), in absorbent product such as tampon and other, is usually in the range of about 1% to about 40%, to give satisfactory results (see page 3, right columns, lines 30-40, page 4, right column, lines 5-30). This is cited here to inform the applicant of the **well known plasticizer range** in absorbent product and could be used in the next office action if necessary.

2) US Patent 4,731,269 is also cited to show well known feed rate of plasticizer, i.e. polyhydric alcohols (as in the claimed invention), in paper product, is usually in the range of about 10% to about 20% (see c3:20-30).

3) US Patent 3,963,347 in 1976 is also cited to show well known feed rate of plasticizer, i.e. polyhydric alcohols (as in the claimed invention), in paper product to control elasticity, which is in the range of about 1 to about 40% (see c4:62-67). This is cited here to inform the applicant of the well known plasticizer range in paper product and could be used in the next office action.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 3629

7. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel and not to the examiner. As the official records and applications are located in the clerical section of the examining Tech Center, the clerical personnel can readily provide status information without contacting the examiner. See MPEP 203.08. The Tech Center clerical receptionist number is (703) 308-1113 or <http://pair-direct.uspto.gov>

In receiving an Office Action, it becomes apparent that certain documents are missing, e. g. copies of references, Forms PTO 1449, PTO-892, etc., requests for copies should be directed to Tech Center 3600 Customer Service at (703) 306-5771, or e-mail [CustomerService3600@uspto.gov](mailto:CustomerService3600@uspto.gov) .

Any inquiry concerning the merits of the examination of the application should be directed to Dean Tan Nguyen at telephone number (703) 308-2053. My work schedule is normally Monday through Friday from 7:00 am through 4:30 pm.

Should I be unavailable during my normal working hours, my supervisor John Weiss may be reached at (703) 308-2702. The FAX phone numbers for formal communications concerning this application are (703) 872-9306. Informal communications may be made, following a telephone call to the examiner, by an informal FAX number to be given.

Other possibly helpful telephone numbers are:

Allowed Files & Publication	(703) 305-8322
Assignment Branch	(703) 308-9287
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/ 8335
Fee Questions	(703) 305-5125
Intellectual Property Questions	(703) 305-8217
Petitions/Special Programs	(703) 305-9282
Terminal Disclaimers	(703) 305-8408
Information Help Line	1-800-786-9199

dtn  
October 16, 2004

  
DEANT. NGUYEN  
PRIMARY EXAMINER